



The ANTARES 8AI Remote I/O Module is suitable for the direct linking of 8 intrinsically safe two-conductor transmitters. NAMUR sensors, optocouplers, wired and unwired mechanical contacts or other actuating elements can be connected with intrinsic safety. All of the I/O module's transmission channels are conductively connected to each other. The ANTARES 8AI Remote I/O Module is operated by and supplied with power by the ANTARES Rail Control Unit (RCU). A bus rail is not necessary. The hot-swap capability allows the electronic unit to be replaced without disconnecting from voltage even in an explosive atmosphere. Parameters can be set for each channel. Open circuit/short circuit monitoring can be programmed for each channel. See the system description for installation instructions.

Explosion protection

Marking ATEX	II 2(1) G Ex ib [ja IIC/IIB Ga] IIC T4 Gb II (1) D [Ex ia Da] IIC
Certification	PTB 11 ATEX 2017
Marking IECEx	Ex ib [ja IIC/IIB Ga] IIC T4 Gb [Ex ia Da] IIC
Certification	IECEx PTB 11.0059
Marking CSA	Class I, Zone 1
Certification	CSA 2567944
Other approvals and certificates, see www.bartec.de	
Ambient temperature range	-20 °C to +50 °C -20 °C to +60 °C (in conjunction with a distance module)

Safety data per transmission Channel

Module	U_o/U_i	I_o/I_i	P_o	C_i	L_i
8AI	27.5 V	87 mA	598 mW	6 nF	negligible
Ex ia IIC	C_o max.	L_o min.		C_o min.	L_o max.
8AI	79 nF	0.2 mH	or	37 nF	1.7 mH
Ex ia IIB	C_o max.	L_o min.		C_o min.	L_o max.
8AI	666 nF	0.1 mH	or	264 nF	16 mH

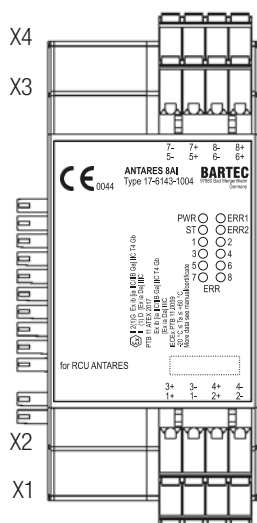
Technical data

Enclosure material	PA
Protection class (EN 60529)	Enclosure: IP 30 in the ANTARES system construction
Electrical connections	plug-in tension spring-loaded clamps, 4-pole, up to 2.5 mm ² optional coding and numbering
Mounting rail	TH 35-15 DIN EN 60715 (steel, galvanised)
Device and terminal designation	see accessories
Dimensions (W x H x D)	45 mm x 110 mm x 114.5 mm
Weight	approx. 390 g
Storage and transport temperature	-25 °C to +85 °C
Humidity	5 to 95 %, non-condensing
Degree of contamination (IEN 60664-1)	2
Vibration (EN 60068-2-6)	2 g/7 mm; 5 Hz to 200 Hz in all 3 axes
Shock (EN 60068-2-27)	15 g, 11 ms, ± 3 shocks per direction

Electrical data

Number of Channels	8 analog inputs Ex i (short-circuit-proof)
Galvanic Isolation	between inputs and internal bus
Open circuit/short circuit	settable for each Channel with Software
Signal range	4 to 20 mA
Signal	min. 0 mA max. 20.5 mA
Short-circuit current	max. 20.8 mA
Input resistance	$R_i = 10 \Omega$
Resolution	16 bit (15 bit + prefix)
Tolerance	± 0.1 % of the measuring range at +25 °C
Influence of the ambient temperature	± 0.01 %/K of the measuring range
Minimum voltage at 20 mA	16 V
Displays	LEDs in enclosure front: Status: PWR, ST, ERR1, ERR2 Inputs: for each Channel 1 LED ERR

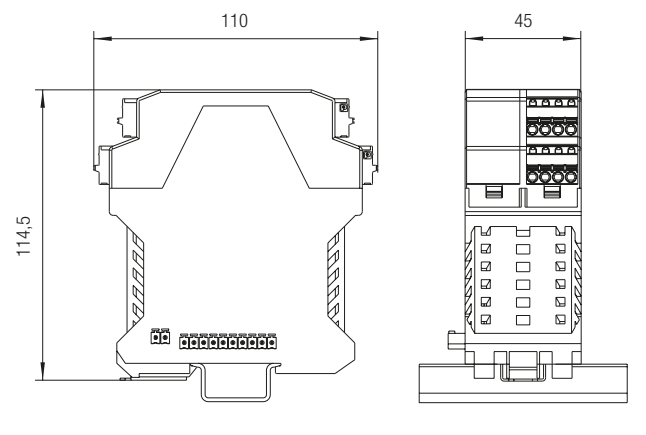
Wiring diagram/terminal assignment



Terminal block	Terminal	Description	
X4	7-	Minus terminal	Channel 7
	7+	Plus terminal	Channel 7
	8-	Minus terminal	Channel 8
	8+	Plus terminal	Channel 8
X3	5-	Minus terminal	Channel 5
	5+	Plus terminal	Channel 5
	6-	Minus terminal	Channel 6
	6+	Plus terminal	Channel 6
X2	3+	Plus terminal	Channel 3
	3-	Minus terminal	Channel 3
	4+	Plus terminal	Channel 4
	4-	Minus terminal	Channel 4
X1	1+	Plus terminal	Channel 1
	1-	Minus terminal	Channel 1
	2+	Plus terminal	Channel 2
	2-	Minus terminal	Channel 2

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Dimensions



LED	Colour	Meaning
PWR	GN	Power OK, goes out in the event of undervoltage
ST	GN	Data exchange active
ERR1	RT	Communication error
ERR2	RT	Error in the module
ERR 1-8	RT	Channel error line break/short circuit

Ordering information

ANTARES Remote I/O Module 8AI 17-6143-1004/0000

Technical data subject to change without notice.